In the Claims

1-2. Cancelled.

3. (currently amended) A network switch for receiving data packets including header portions and for selectively forwarding said data packets, said switch comprising:

a register for receiving a header portion of ~~a packet~~ an Ethernet packet;

a look-up engine operative to obtain associated data in response to the header portion, wherein said associated data includes an initial port bitmask; and

a network processor which is operative to perform a processing function in response to at least one of said header portion and said associated data,

said network processor executing said processing function to cause modification of said initial port bitmask,

wherein said look-up engine provides for said network processor a first indication, said first indication indicating that said associated data has been obtained; ~~and~~

said network processor is operative in response to said first indication to execute said processing function and to provide to said look-up engine a second indication, said second indication indicating that said function has been executed.

4. (currently amended) A network switch according to claim 3 wherein said look-up engine in response to said second indication causes the provision of a final port bitmask for said Ethernet packet.

5 (currently amended) A network switch according to claim 3 wherein said associated data includes a field indicating replication of the Ethernet packet and wherein said network processor is operative to access said field and to control a replication process for the packet.

6-7. Cancelled.

8. (currently amended) A network switch for receiving data packets including header portions and for selectively forwarding said data packets, said switch comprising:

a register for receiving a header portion of ~~a packet~~ an Ethernet;

a look-up engine operative to obtain associated data in response to the header portion, wherein said associated data includes an initial port bitmask; and

a network processor which is operative to perform a processing function in response to at least one of said header portion and said associated data, said network processor executing said processing function to cause modification of said initial port bitmask; and

wherein said look-up engine provides for said network processor a first indication, said first indication indicating that said associated data has been obtained; and

said network processor is operative to provide to said look-up engine a second indication, said second indication indicating that said modification has been performed, and

said look-up engine is operative after providing said first indication to wait for said second indication before performing any further operation on said packet.

9. (currently amended) A network switch according to claim 8 wherein said look-up engine in response to said second indication causes the provision of a final port bitmask for said Ethernet packet.

10. (currently amended) A network switch according to claim 9 wherein said associated data includes a field indicating replication of the Ethernet packet and wherein said network processor is operative to access said field and to control a replication process for the Ethernet packet.

11. (currently amended) A method of operating a network switch for receiving data packets including header portions and for selectively forwarding said data packets, said method comprising:

receiving a header portion of ~~a packet~~ an Ethernet packet;

operating a look-up engine to obtain associated packet forwarding data in response to the header portion, said forwarding data including an initial port bitmask;

providing from said look-up engine to said network processor a first indication, said first indication indicating that said associated packet forwarding data has been obtained;

executing a processing function by means of a network processor in response to at least one of said header portion and said associated packet forwarding data, said processing function including modification of said initial port bitmask;

operating said network processor in response to said first indication to cause said modification of said associated packet forwarding data;

providing to said look-up engine a second indication, said second indication indicating that said modification has been performed;

delaying any further operation of said look-up engine in relation to said Ethernet packet until said second indication is received by said look-up engine; and

in response to said second indication providing by means of said look-up engine a final port bitmask for said Ethernet packet.

12. (cancelled)